IN THE CLAIMS:

1. (Currently Amended) An automated method for analyzing substances containing cellular material, the method comprising the steps of:

activating a test apparatus having at least one liquid ejection device acting in cooperation with an electronically actuated printhead to dispense a first defined volume from the at least one liquid ejection device, the volume containing at least one potential pharmaceutically active agent, the first defined volume dispensed into contact with at least one defined volume of a substance containing cellular material wherein the cellular material is at least one of whole cells and recognizable cellular components from intact cells;

detecting in the at least one defined volume of the substance containing cellular material ~~triggered an~~ pharmacological effect triggered by introduction of the first defined volume of the potential pharmaceutically active agent;

generating information indicative of the effect of the at least one potentially active agent on the cellular material; and

analyzing the generated information to generate a correlation factor.

2. (Previously Amended) The automated method of claim 1 wherein the liquid ejection device comprises at least one cartridge containing at least one potential pharmaceutically active agent, the cartridge removably associated with the liquid ejection device.

3. (Original) The automated method of claim 1 wherein the defined volume of the substance containing cellular material is maintained in contact with a suitable testing substrate, the suitable testing substrate having a contact surface which is reactively inert to interaction with the cellular material under study.

4. (Previously Amended) The automated method of claim 3 wherein the defined volume of the substance containing cellular material comprises a plurality of individual volumes, wherein each individual volume is between about 1 and about 500 picoliters and wherein characteristics of the substance containing c llular mat rial may vary from individual volum to individual volume.

5. (Previously Amended) The automated method of claim 4 wherein the at least one liquid ejection device dispenses varying quantities of at least one potential pharmaceutically active agent to contact with the individual volume of the substance containing cellular material.

6. (Previously amended) The automated method of claim 4 wherein the at least one liquid ejection device dispenses a quantity of at least one potentially pharmaceutically active agent into contact with selected individual volumes present, the dispensed quantity varying compositionally across the individual volumes of the substance containing cellular material.

7. (Original) The automated method of claim 1 wherein the defined volume of a substance containing cellular material is present as a plurality of individual samples arranged in an array capable of yielding statistically viable data.

8. (Original) The automated method of claim 7 wherein the individual samples are arranged in a defined two-dimensional array.

9. (Original) The automated method of claim 7 wherein the individual samples are arranged in an interactive linear array.

10. (Previously Amended) The automated method of claim 1 further comprising the step of interactively activating at least one second liquid ejection device to dispense a second defined volume of a potentially pharmaceutically active substance into a contact with the defined volume of the substance containing cellular material.

Claims 11-26 are canceled without prejudice as being directed to a non-elected invention.

27. (Currently Amended) The automated method of claim 2 wherein the ~~removable~~ cartridge removably associated with the liquid ejection device comprises a container having an interior volume containing at least one potential pharmaceutically active agent and at least one memory storage device capable of capturing and maintaining information pertaining to cartridg function and contents.

28. (Currently Amended) Th automated method of claim 27 wh rein the ~~removable~~ cartridge removably associated with the liquid ejection device further comprises control electronics configured to convert received information into control output pertinent to at least one aspect of the effect analysis.

29. (Previously Presented) The automated method of claim 1 further comprising the step of positioning at least one volume of a substance containing cellular material on a suitable testing substrate, the positioning step occurring prior to the activation of the test apparatus.

30. (Previously Presented) The automated method of claim 29 wherein the positioning step comprises positioning a plurality of volumes of substance containing cellular material on the substrate, the plurality of volumes each being between about 1 and about 500 picoliters and is present in an array capable of yielding statistically viable data.

31. (Currently Amended) ~~An~~ The automated method ~~for analyzing substances containing cellular material~~of claim 1 further comprising the steps of: ~~, the method comprising the steps of:~~

~~activating a test apparatus having at least one ejection device to dispense a first volume containing at least one potential pharmaceutically active agent into contact with a plurality of volumes of a substance containing cellular material;~~

~~detecting a change in at least one volume of the substance containing cellular material triggered by introduction of the first volume into at least one of the volumes of the substance containing cellular material;~~

~~recording the detected change for review and interpretation; and~~

upon ~~interpretation~~ generation of the correlation factor~~of the recorded detected change~~, altering dispensation of the potential pharmaceutically active material in an iterative manner in subsequent volumes of a substance containing cellular material.

32. (Previously Presented) The method of claim 31 wherein the iterative alteration is a function of ongoing factorial analysis.

33. (Previously Pr sented) The m thod of claim 32 wherein each of th plurality of volumes are a range between about 1 picoliter and 500 picoliters.

34. (Currently Amended) The method of claim 33 wherein the first volume is present as a plurality of volumes ~~are~~ arranged in a two dimensional array.

35. (Currently Amended) The method of claim 34 wherein the first volume is present as a plurality of volumes ~~are~~ arranged in a three-dimensional array.